1985

Nebraska Summary: S002 Deutz-Allis 7145

Nebraska Tractor Test Laboratory
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SUMMARY OF OECD TEST 959—NEBRASKA SUMMARY 002
DEUTZ FAHR DX 7.10 DIESEL
ALSO DEUTZ ALLIS 7145 DIESEL
36 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP *(kW)*	Crank shaft speed rpm	Fuel Consumption Gal/hr *(l/h)*	lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed—(PTO speed—1145 rpm)					
144.6 *(107.8)*	2400	8.61 *(32.60)*	0.416 *(0.253)*	16.80 *(3.31)*	
Standard Power Take-off Speed (1000 rpm)					
143.0 *(106.6)*	2095	7.99 *(30.26)*	0.390 *(0.237)*	17.87 *(3.52)*	Air temperature
VARING POWER AND FUEL CONSUMPTION					66°F *(19°C)*
125.0 *(93.2)*	2439	7.71 *(29.17)*	0.431 *(0.262)*	16.19 *(3.19)*	
....	2542	2.06 *(7.81)*	....	....	Relative humidity
63.2 *(47.1)*	2468	4.85 *(18.36)*	0.536 *(0.326)*	13.05 *(2.57)*	50%
144.6 *(107.8)*	2400	8.61 *(32.60)*	0.416 *(0.253)*	16.80 *(3.31)*	Barometer
31.8 *(23.7)*	2486	3.45 *(13.05)*	0.756 *(0.460)*	9.24 *(1.82)*	29.5″ Hg *(99.6 kPa)*
94.3 *(70.3)*	2455	6.21 *(23.52)*	0.460 *(0.280)*	15.18 *(2.99)*	

Maximum Torque 385.7 lb. ft *(523 Nm)* @ 1696 RPM
Maximum Torque Rise 22%

DRAWBAR PERFORMANCE (Front Drive Engaged)

Power Hp *(kW)*	Drawbar pull *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Temp.°F *(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
75% of Pull at Maximum Power—Five Hours 23rd (2MH) Gear									
98.8 *(73.7)*	8270 *(36.80)*	4.48 *(7.21)*	2463	3.1	0.510 *(0.310)*	13.71 *(2.70)*	140 *(60)*	48 *(9)*	29.5 *(99.5)*
MAXIMUM POWER IN SELECTED GEARS									
16th Gear (1ML)									
111.0 *(82.8)*	19100 *(84.96)*	2.18 *(3.51)*	2396	14.9	0.539 *(0.328)*	12.94 *(2.55)*	147 *(64)*	45 *(7)*	29.6 *(100.0)*
17th Gear (2LH)									
116.8 *(87.1)*	18350 *(81.63)*	2.39 *(3.84)*	2399	11.9	0.511 *(0.311)*	13.71 *(2.70)*	162 *(72)*	50 *(10)*	29.6 *(99.9)*
18th Gear (3LL)									
119.4 *(89.0)*	16530 *(73.52)*	2.71 *(4.36)*	2399	9.1	0.500 *(0.304)*	13.96 *(2.75)*	165 *(74)*	52 *(11)*	29.6 *(99.9)*
19th Gear (1MH)									
124.0 *(92.5)*	15750 *(70.07)*	2.95 *(4.75)*	2397	8.1	0.487 *(0.296)*	14.37 *(2.83)*	158 *(70)*	52 *(11)*	29.6 *(99.9)*
20th Gear (2ML)									
123.0 *(91.7)*	13700 *(60.93)*	3.37 *(5.42)*	2402	6.5	0.488 *(0.297)*	14.37 *(2.83)*	162 *(72)*	54 *(12)*	29.6 *(99.9)*
21st Gear (4LH)									
124.4 *(92.8)*	13320 *(59.26)*	3.50 *(5.64)*	2400	6.1	0.480 *(0.292)*	14.57 *(2.87)*	172 *(78)*	54 *(12)*	29.6 *(99.9)*
22nd Gear (4LL)									
122.6 *(91.4)*	11680 *(51.97)*	3.93 *(6.33)*	2402	4.8	0.490 *(0.298)*	14.26 *(2.81)*	167 *(75)*	54 *(12)*	29.6 *(99.9)*
23rd Gear (2MH)									
126.6 *(94.4)*	11030 *(49.06)*	4.31 *(6.93)*	2402	4.5	0.473 *(0.288)*	14.77 *(2.91)*	165 *(74)*	54 *(12)*	29.6 *(99.9)*
24th Gear (3ML)									
123.2 *(91.9)*	9730 *(43.29)*	4.75 *(7.64)*	2397	3.9	0.487 *(0.296)*	14.37 *(2.83)*	169 *(76)*	59 *(15)*	29.6 *(99.8)*
25th Gear (4LH)									
125.5 *(93.6)*	9410 *(41.84)*	5.00 *(8.05)*	2399	3.6	0.477 *(0.290)*	14.67 *(2.89)*	158 *(70)*	59 *(15)*	29.6 *(99.8)*

Location of Test: DLG Testing Station for Agricultural Machinery, West Germany

Dates of Test: January until April 1985

Manufacturer: Klockner-Humboldt-Deutz AG, 5000 Cologne 80, West Germany

FUEL, OIL AND TIME: Fuel No. 2 Diesel **Cetane No.** NA **Specific gravity converted to 60°/60°F *(15°/15°C)*** 0.838 **Fuel weight** 6.976 lbs/gal *(0.836 kg/l)* **Oil SAE** 15W/40 **Oil Consumption for 10 hours** 2.16 lb *(980 gm)* **Transmission lubricant** SAE 15W/40 **Front axle lubricant** SAE 90 API-GL5.

ENGINE: Make Deutz Diesel **Type** six cylinder vertical with turbocharger **Serial No.** 689 4826 **Crankshaft** lengthwise **Rated engine speed** 2400 **Bore and stroke** 4.016″ × 4.921″ *(102 mm × 125 mm)* **Compression ratio** 15.5 to 1 **Displacement** 374 cu in *(6128 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** dry paper element filter with precleaner **Oil filter** full flow cartridge **Oil cooler** separate radiators for crankcase and transmission oils **Fuel filter** replaceable cartridge **Muffler** vertical.

CHASSIS: Type four wheel drive **Serial No.** 7643 0005 **Tread width** rear 70.9″ *(1800 mm)* to 86.6″ *(2200 mm)* front 72.7″ *(1846 mm)* to 76.9″ *(1952 mm)* **Wheel base** 111.3″ *(2826 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (2) range operator controlled powershift **Nominal travel speeds mph *(km/h)*** first 0.22 *(0.36)* second 0.32 *(0.51)* third 0.37 *(0.60)* fourth 0.44 *(0.70)* fifth 0.52 *(0.84)* sixth 0.61 *(0.98)* seventh 0.72 *(1.16)* eighth 0.82 *(1.32)* ninth 1.01 *(1.62)* tenth 1.15 *(1.85)* eleventh 1.52 *(2.44)* twelfth 1.58 *(2.54)* thirteenth 1.90 *(3.06)* fourteenth 2.13 *(3.42)* fifteenth 2.21 *(3.55)* sixteenth 2.52 *(4.05)* seventeenth 2.67 *(4.29)* eighteenth 2.93 *(4.71)* nineteenth 3.16 *(5.09)* twentieth 3.54 *(5.69)* twenty-first 3.67 *(5.91)* twenty-second 4.08 *(6.56)* twenty-third 4.44 *(7.14)* twenty-fourth 4.87 *(7.84)* twenty-fifth 5.12 *(8.24)* twenty-sixth 5.50 *(8.85)* twenty-seventh 6.11 *(9.84)* twenty-eighth 6.79 *(10.93)* twenty-ninth 6.90 *(11.11)* thirtieth 7.72 *(12.43)* thirty-first 8.52 *(13.71)* thirty-second 9.69 *(15.60)* thirty-third 10.64 *(17.13)* thirty-fourth 13.35 *(21.49)* thirty-fifth 14.82 *(23.85)* thirty-sixth 18.59 *(29.92)* reverse 0.39 *(0.63)*, 0.55 *(0.88,)* 0.75 *(1.21)*, 1.05 *(1.69)*, 2.62 *(4.21)*, 3.28 *(5.28)*, 3.67 *(5.91)*, 4.61 *(7.42)*, 5.06 *(8.15)*, 6.35 *(10.22)*, 7.05 *(11.35)*, 8.85 *(14.24)* **Clutch** dry double plate hydraulically power actuated by foot pedal **Brakes** multiple wet disc hydraulically operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2154 engine rpm and 1000 rpm at 2095 engine rpm **Unladen tractor mass** 13180 lb *(5980 kg)*.

TRACTOR SOUND LEVEL	dB(A)
Maximum sound level	84.0
Bystander in 36th (4HH) gear	88.0

CENTER OF GRAVITY

Horizontal distance forward from centerline of rear wheels 43.6″ *(1107 mm)*
Vertical distance above roadway 40.0″ *(1017 mm)*
Horizontal distance from center of rear wheel tread 0.5″ *(13 mm)* to the left

TURNING ON A CONCRETE SURFACE

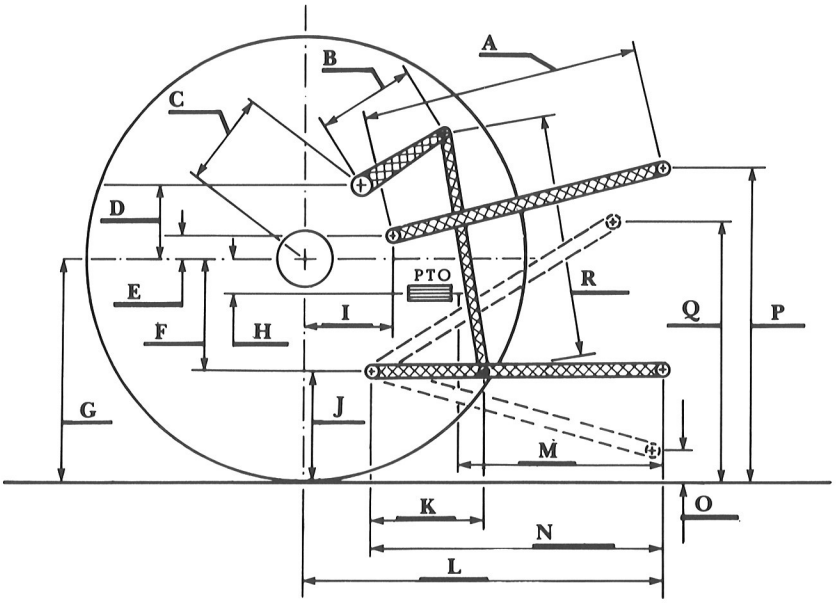
Turning radius—with brake applied right 238″ *(6.04 m)* left 248″ *(6.31 m)*
—without brake right 281″ *(7.13 m)* left 294″ *(7.47 m)*
Turning space radius—with brake applied right 252″ *(6.39 m)* left 265″ *(6.72 m)*
—with brake right 294″ *(7.48 m)* left 310″ *(7.88 m)*

TIRES, BALLAST AND WEIGHT		With Ballast	Without Ballast
Rear Tires	—No., size, ply & psi *(kPa)*	Two 20.8R38; 8; 14 *(100)*	Two 20.8R38; 8; 14 *(100)*
Ballast	—Liquid (total)	2315 lb *(1050 kg)*	None
	—Cast Iron (total)	420 lb *(190 kg)*	None
Front Tires	—No., size, ply & psi *(kPa)*	Two 18.4-26; 8; 16 *(110)*	Two 18.4-26; 8; 16 *(110)*
Ballast	—Liquid (total)	1400 lb *(635 kg)*	None
	—Cast Iron (total)	1235 lb *(560 kg)*	None
Height of Drawbar		20.3 in *(515 mm)*	20.7 in *(525 mm)*
Static Weight	—Rear	10800 lb *(4900 kg)*	8155 lb *(3700 kg)*
	—Front	7960 lb *(3610 kg)*	5240 lb *(2375 kg)*
	—Total	18760 lb *(8510 kg)*	13395 lb *(6075 kg)*

THREE POINT HITCH PERFORMANCE (STATIC TEST)

CATEGORY: II or III
Quick Attach: Walterscheid quick coupler

Maximum Force Exerted Through Whole Range:	10070 lbs *(44.80 kN)*
i) Opening pressure of relief valve:	NA
Sustained pressure of the open relief valve:	2530 psi *(178 bar)*
ii) Pump delivery rate at minimum pressure and rated engine speed:	16.2 GPM *(61.2 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	14.9 GPM *(56.4 l/min)*
Delivery pressure:	2160 psi *(152 bar)*
Power:	19.2 Hp *(14.3 kW)*



Hitch Dimensions as Tested — No Load

	inch	*mm*
A	30.3	*770*
B	12.6	*320*
C	20.0	*508*
D	18.7	*475*
E	3.6	*92*
F	12.2	*310*
G	33.7	*855*
H	5.6	*142*
I	15.1	*383*
J	21.5	*545*
K	22.2	*563*
L	45.9	*1166*
M	22.1	*561*
N	39.7	*1008*
O	7.9	*200*
P	40.5	*1028*
Q	34.6	*880*
R	36.7	*931*

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures.

Manufacturers allowed gross vehicle weight—18740 lb *(8500 kg)*
The cooling medium temperatures were taken at the engine cylinder head.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **959,** Nebraska Summary 002, February 9, 1987.

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